

AMENDMENTS TO THE SPECIFICATION

Please replace the section of the specification titled "SUMMARY OF THE INVENTION" (beginning on page 5) with the following replacement section:

--- SUMMARY OF THE INVENTION

According to a first aspect of the present invention, there is provided a communications method for use in a wireless network of devices which includes transmitting, from a first device, data in a first time slot to each of at least two receiving devices in the wireless network, receiving, at one or more other devices, the data transmitted from the first device, and either transmitting, from each of the receiving devices, either a first acknowledgment state in a second time slot after the first time slot, or transmitting a second acknowledgement state in a third time slot after the second time slot, wherein the first and second acknowledgement states are either a positive acknowledge and a negative acknowledge, respectively, or a negative acknowledge and a positive acknowledge, respectively, the second time slot is a slot for all devices in the wireless network for transmitting the first acknowledgement state, the third time slot is a slot for all devices in the wireless network for transmitting the second acknowledgement state, and each device in the wireless network monitors time slots during which they are not transmitting to determine an overall acknowledgement state of the wireless network.

Preferably, the first acknowledgment state is a positive acknowledge, and the second acknowledgment state is a negative acknowledge.

Preferably, the first time slot is variable in length and the second and third time slots are fixed in length. Preferably, the positive acknowledge includes the transmission of a specific coded value containing sufficient redundancy to allow it to be recovered in the presence of received errors.

Similarly the negative acknowledge includes the transmission of a specific coded value containing sufficient redundancy to allow it to be recovered in the presence of received errors.

According to a second aspect of the present invention, there is provided a radio communications system including a transceiver/transmitter and at least two transceiver/receivers, wherein the transceiver/transmitter transmits data in a first time slot to each of the transceiver/receivers, upon receipt of data, each of the transceiver/receivers transmit either a first acknowledgement state in a second time slot, after the first time slot, or a second acknowledgement state in a third time slot after the second time slot, ~~and~~ the first and second acknowledgement states are either a positive acknowledge and a negative acknowledge, respectively, or a negative acknowledge and a positive acknowledge, respectively, the second time slot is a slot for all of the transceiver/receivers in the radio communication system for transmitting the first acknowledgement state, the third time slot is a slot for all of the transceiver/receivers in the radio communication system for transmitting the second acknowledgement state, and each of the transceiver/receivers and the transceiver/transmitter monitor a transmission medium during time slots in which they are not transmitting to determine an overall acknowledgement state of the radio communication system.

Preferably, the first acknowledgment state is a positive acknowledge, and the second acknowledgment state is a negative acknowledge.

Preferably, the first time slot is variable in length and the second and third time slots are fixed in length.

Preferably, upon each transceiver/receiver detecting a correctly coded transmission in the negative acknowledge time slot, each transceiver/receiver discards the data previously received

in the first time slot, and the transceiver/transmitter retransmits the data to each of the transceiver/receivers.

According to a third aspect of the present invention, there is provided a transceiver/receiver for use in a radio communications system including at least one transceiver/transmitter and at least one other transceiver/receiver, wherein upon receiving a data packet in a first time slot from at least one of the transceiver/transmitters, the transceiver/receiver either transmits a first acknowledgment state in a second time slot, after the first time slot, or transmits a second acknowledgment state in a third time slot, after the second time slot, ~~and~~ the first and second acknowledgment states are either a positive acknowledge and a negative acknowledge, respectively, or a negative acknowledge and a positive acknowledge, respectively, the second time slot is a slot for each of the transceiver/receivers in the radio communication system for transmitting the first acknowledgement state, the third time slot is a slot for each of the transceiver/receivers in the radio communication system for transmitting the second acknowledgement state, and the transceiver/receiver monitors a communication medium during a time slot in which the transceiver/receiver is not transmitting to determine an overall acknowledgment state of the radio communication system.

Preferably, the transceiver/receiver further receives the first acknowledgment state in the second time slot from at least one of the other transceiver/receivers in the communication system or receives the second acknowledgment state in the third time slot from at least one of the other transceiver/receivers in the communication system.

Preferably, the first acknowledgment state is a positive acknowledge, and the second acknowledgment state is a negative acknowledge.

Upon receiving a negative acknowledge from the at least one other transceiver/receiver, the transceiver/receiver discards the data packet received in the first time slot.

According to a fourth aspect of the present invention, there is provided a transceiver/transmitter for use in a radio communications system including at least ~~one transceiver/receiver~~ two transceiver/receivers, wherein the transceiver/transmitter transmits a data packet in a first time slot to each at least one of the transceiver/receivers and receives from each of the transceiver/receivers ~~one or both of~~ a first acknowledgement state in a second time slot after the first time slot, or from at least one of the transceiver/receivers and a second acknowledgement state in a third time slot after the second time slot ~~from at least one of the transceiver/receivers~~, and the first and second acknowledgement state are either a positive acknowledge and a negative acknowledge, respectively, and a negative acknowledge and a positive acknowledge, respectively, the second time slot is a slot for all transceiver/receivers in the radio communication system for transmitting the first acknowledgement state, the third time slot is a slot for all transceiver/receivers in the radio communication system for transmitting the second acknowledgement state, and the transceiver/transmitter monitors a communication medium during the second and third time slots to determine an overall acknowledgement state of the radio communication system.

According to a fifth aspect of the present invention, there is provided in a wireless network including a transceiver/transmitter and at least two transceiver/receivers, a method of disseminating data to be shared with the at least two transceiver/receivers, the method including:

transmitting from the transceiver/transmitter, the data to the at least two transceiver/receivers;

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upon unsuccessfully receiving the data by at least one of the at least two transceiver/receivers, transmitting negative acknowledge data to indicate unsuccessful receipt of the data;

retransmitting the data from the transceiver/transmitter; and

replacing the data received by each of the at least two transceiver/ receivers with the retransmitted data in each of the at least two transceiver/receivers.

The system and protocol of the present invention has many uses including applications in controlling domestic, industrial and office appliances. ---